REMARKS

Claims 1-66 are pending. Applicant has amended claims 1, 23, 34, and 56.

The Examiner indicated that several elements of the specification and figures were not in compliance. Applicant has amended the specification and figures herein to comply with the changes requested by the Examiner. Accordingly, applicant respectfully requests that this objection be withdrawn.

The Examiner rejected the claims in accordance with the following table. Applicant respectfully traverses these rejections below.

Statutory Section	Claims	References
35 U.S.C. § 102(e)	1-9, 15, 17-28, 34-42, 48, and 50-61	Slingwine (6,219,690)
35 U.S.C. § 103(a)	10-14, 29-31, 43-47, and 62-64	Slingwine and Alpert (5,621,886).
35 U.S.C. § 103(a)	16 and 49	Slingwine and Potash (2002/0103847)
35 U.S.C. § 103(a)	32-33 and 65-66	Slingwine and Shrote (5,774,358)

Slingwine describes a system for implementing a mutual exclusion (mutex) in a multiprocessor system. Slingwine describes a technique that observes the behavior of a thread and performs operations that modify shared data when the thread is observed to be in a state where it will not modify the shared data. The technique described by Slingwine is passive in that it waits for the thread to be in the desired state before performing an operation that modifies shared data. Slingwine, Abstract. Slingwine does not describe notifying the thread to enter a known state.

In contrast, applicant's technology describes a processor architecture that defines multiple protection domains with simultaneously executing streams. Each protection domain defines the program memory, data memory, and number of streams that are allocated to a task that has multiple threads. Specification, paragraph [0007]. When executing tasks using streams within this architecture, special techniques are used to ensure that the threads of the task are in a known state. These techniques are the subject of applicant's claims. In some embodiments, the threads of the task participate in ensuring

that the task is in a known state (e.g., by ensuring a proper state of the memory the tasks are using). In such embodiments, the threads of the task have an active role in achieving the known state in a way that is not typical in other systems.

Each of applicant's claims recites notifying a task to enter a known state. Claims 1-22 recite "notifying each of the threads of the task executing on a stream of the processor to enter a known state." Claims 23-33 recite "notifying each of the threads of the task executing on a parallel processor architecture having multiple simultaneously executing protection domains to exit the known state." Claims 34-55 recite "a component for notifying each of the threads of the task executing on a parallel processor architecture having multiple simultaneously executing streams to enter a known state." Claims 56-66 recite "a component for notifying each of the threads of the task to exit the known state, wherein the task is executing on a parallel processor architecture having multiple simultaneously executing protection domains."

In most multithreaded processor systems, the operating system simply preempts a thread whenever it chooses, and swaps in another thread. The operating system then handles the preservation of the thread's state. However, because of the nature of the protection domains defined by applicant's technology, it is desirable to coordinate with the task to place the task in a known state so that the task can preserve various elements of its executing state within the protection domain, "[t]he swapping in and swapping out of tasks requires cooperation on the part of the task." Specification, paragraph [0054]. Slingwine and the other references relied upon by the Examiner do not describe a task executing within a protection domain, or notifying the task to enter or exit a known state. Rather, the relied upon references describe typical multitasking in which the operating system simply preempts the thread without providing any notification or enlisting the cooperation of the thread. Therefore, applicant's claims are patentable over Swingline, both alone and in combination with the other references listed above. Accordingly, applicant respectfully requests that these rejections be withdrawn.

Based upon these remarks and amendments, applicant respectfully requests reconsideration of this application and its early allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-3265. Applicant believes all required fees are being paid in connection with this response. However, if an additional fee is due, please charge our Deposit Account No. 50-0665, under Order No. 324758001US5 from which the undersigned is authorized to draw.

Dated: 9/26/2007

Respectfully submitted,

By
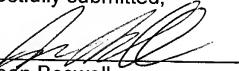
J. Mason Boswell
Registration No.: 58,388
PERKINS COIE LLP
P.O. Box 1247
Seattle, Washington 98111-1247
(206) 359-8000
(206) 359-7198 (Fax)
Attorney for Applicant